

A NEW SPECIES OF THE GENUS EO KINGDONELLA FROM SICHUAN , CHINA (ORTHOPTERA , ACRIDOIDEA , CATANTOPINAE)

ZHENG Zhe-Min¹ , SHI Fu-Ming²

1. Institute of Zoology , Shaanxi Normal University , Xi'an 710062 , China
2. College of Life Sciences , Hebei University , Baoding 071002 , China

Abstract A new species of the genus *Eokingdonella* Yin , namely *Eokingdonella cyanecula* sp. nov. from Sichuan is described in this paper. The new species is similar to *Eokingdonella tibetana* (Mistshenko , 1952) , but differs from the latter in length of furcula of terminal tergite as 1/11 times as supra-anal plate , hind tibia dark blue , apex yellowish white , body blue brown. The type specimens are deposited in the Institute of Zoology , Shaanxi Normal University and Museum of Hebei University.

Key words Orthoptera , Catantopidae , *Eokingdonella* , new species.

Introduction

The genus *Eokingdonella* was erected by Yin in 1984. So far , the genus includes 7 species , *E. gentiana* (Uv. , 1939) , *E. kaulbacki* (Uv. , 1939) , *E. tibetana* (Mistsh. , 1965) , *E. changtunica* Yin , 1984 , *E. bayanharensis* Huo , 1995 , *E. luhuensis* Zheng et Shi , 2007 and *E. angqianensis* Chen et Zheng , 2009. This genus is endemic in China , all species occur in Qinghai-Xizang Plateau of China. The genus *Eokingdonella* resembles *Kingdonella* Uvarov , but the former has abdominal tympanum.

This paper describes one new species , namely *Eokingdonella cyanecula* sp. nov. from Sichuan Province , China. The type specimens are preserved in Insect Collection of Institute of Zoology , Shaanxi Normal University , and the Museum of Hebei University.

Genus *Eokingdonella* Yin , 1984

Yin , 1984. Grasshoppers and Locusts from Qinghai-Xizang Plateau of China.
74. Zheng , 1993. Acritaxonomy , 146; Zheng and Shi , 2007. Acta Zootaxonomica Sinica , 32 (3) : 671.

Type species : *Eokingdonella changtunica* Yin , 1984.

Generic diagnosis. Medium-sized. Head shorter than pronotum. Antennae filiform. Frons vertical or slightly oblique. Median carina and lateral carinae distinct , the length of prozona longer than metazona , posterior margin with triangular emargination. Prosternum conical , slightly acute. Upper basal lobe of hind femur longer than lower one , medial area of external side of hind femur with feather-shaped sculpture , median keel of upper side smooth , without teeth. Hind tibiae without external apical spines. Tegmina and stridulatory organ absent. Abdominal tympanum obviously visible. Subgenital plate of male short conical.

Key to the species of the genus *Eokingdonella*

- 1 (4) Terminal tergite of abdomen with small furcula , mesosternal interspace wide obviously wider than metasternal interspace
- 2 (3) Furcula small , ovate , anal plate of male broad and short , apex sharp , circus of male reaching the end of anal plate , inner margin

of lower side of hind femur black , basal part red
..... *E. gentiana* (Uv.)

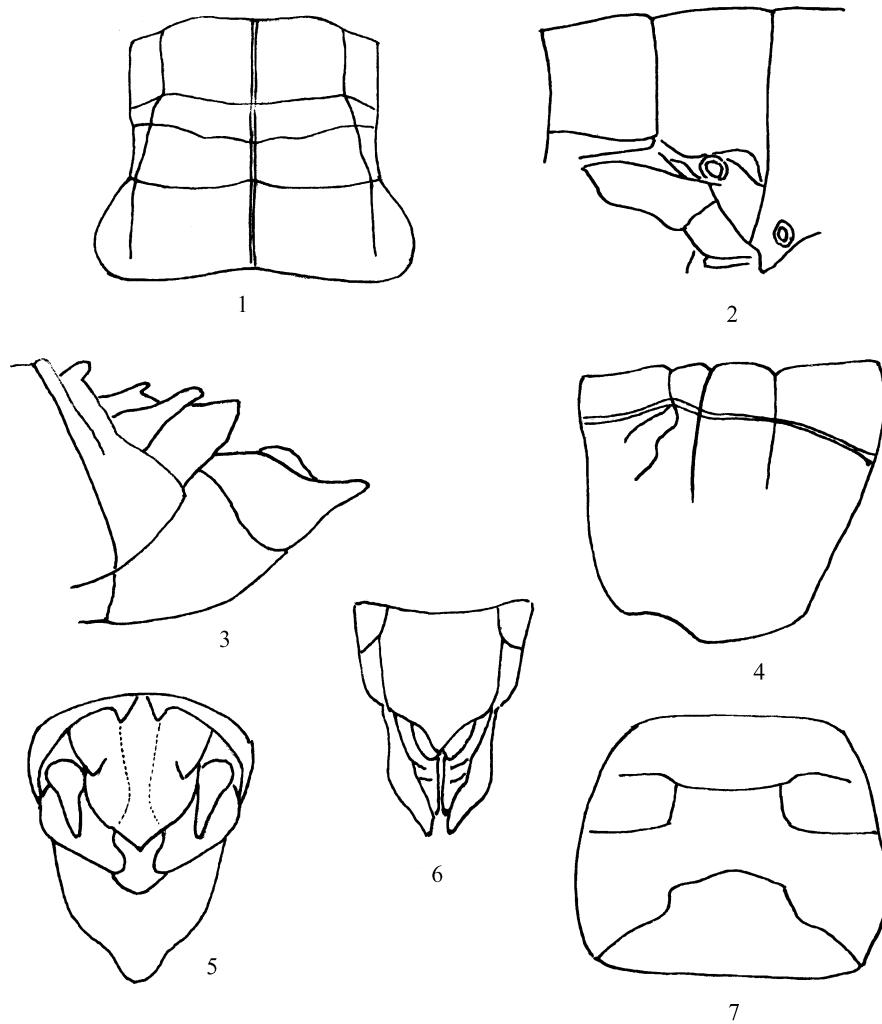
- 3 (2) Furcula very small , triangular , anal plate of male narrow and long , apex rounded , circus of male not reaching the end of anal plate , inner margin of lower side of hind femur with basal 2/3 red and apical 1/3 black *E. angqianensis* Chen et Zheng
- 4 (1) Terminal tergite of abdomen with large furcula , anal plate obviously longer than its wide ; mesosternal interspace wide equal to metasternal interspace
- 5 (14) Lower side of hind femur black or dark brown , proximal part with red spots. Male cerci short , apex not reaching end of supra-anal plate
- 6 (9) Compound eye small , longitudinal diameter equal to subocular furrows
- 7 (8) Length of furcula of terminal tergite as 1/6 times as supra-anal plate , hind tibiae dark blue , apex orange , body brown
..... *E. tibetana* (Mistsh.)
- 8 (7) Length of furcula of terminal tergite as 1/11 times as supra-anal plate , hind tibia dark blue , apex yellowish white ; Body blue brown *E. cyanecula* sp. nov.
- 9 (6) Compound eye large , longitudinal diameter as 1.3-1.4 times as subocular furrows
- 10 (11) furcula of terminal tergite long , length as 1/4 times as supra-anal plate ; upper side of hind femur without black transverse spot *E. changtunica* Yin
- 11 (10) furcula of terminal tergite short , length as 1/6-1/7 times as supra-anal plate ; upper side of hind femora with black transverse spot
- 12 (13) Inner face of lower side of hind femur red , hind tibia light violet *E. bayanharensis* Huo
- 13 (12) Inner face of lower side of hind femur basal 2/3 red and apical 1/3 dark brown , hind tibia black blue
..... *E. luhuensis* Zheng et Shi
- 14 (5) Lower side of hind femur black , basal part without red spot ; cerci long , apex reaching end of supra-anal plate *E. kaulbacki* (Uv.)

Eokingdonella cyanecula sp. nov. (Figs. 1-5)

Male. Medium-sized. Head large , a little shorter than pronotum ; fastigium vertices oblique , slightly concave ; in profile , frons slightly oblique ; frontal ridge wide , upper part a little narrow , lower part widened downward , absent near clypeus , longitudinal groove flattened below median ocellus , facial carinae straight. Antennae filiform , beyond posterior margin of pronotum , compound eyes oval , longitudinal diameter as 1.2 times as its transverse diameter , equal to subocular furrows. Anterior margin of pronotum straight , or slightly

concave, posterior margin with wide concave; median carina and lateral carinae distinct, cut by three transverse sulci, length of prozona as two times as that of metazone, lateral lobes of pronotum higher than long, anterior and posterior lower angles blunt; prosternum conical, stout and short, apex blunt; length of mesosternal lobes as 1.3 times as that of width, most width of mesosternal interspace as two times as long; metasternal interspace obviously more narrow than mesosternal interspace. Tegmen and wing absent. Upper basal lobe of hind femur longer than lower one, upper median carina of femur smooth, length as 3.8 times as its width, apex of

lower lateral genicular lobes blunt. Hind tibiae with eight external spines and nine internal spines on dorsal keels, external apical spines absent, length of first tarsus about equal to that of third tarsi, arolium large, beyond apex of 1/2 claws. Abdominal tympanum developed, obvious. Terminal tergite with triangular furcula, length as 1/11 times as that of supra-anal plate. Supra-anal plate triangular, apex acute, with wide longitudinal groove on dorsal side, lateral margin with one tooth upward. Cerci long conical, not reaching apex of supra-anal plate. Apex of subgenital plate blunt in dorsal view, conical in lateral view, apex a little thin and acute.



Figs. 1-7. *Eokingdonella cyanacula* sp. nov. 1. Pronotum of male, dorsal view. 2. Basal of male abdomen, lateral view. 3. Apex of male abdomen, lateral view. 4. Prontum of male, lateral view. 5. Apex of male abdomen, dorsal view. 6. Apex of female abdomen, ventral view. 7. Mesosternum and metasternum of male.

Color. Body blue brown in life, dark brown in preserved specimens. Margins of Fastigium vertices and lateral margins of frontal ridge orange. Lateral carinae of pronotum orange. Upper side of hind femur with 2-3 black spots, inner margins black, external side on lower margins dark brown, 1/2 prominal part of internal side orange, other dark black. Hind tibiae dark blue, apex yellowish white; Tarsi yellowish white but apex of apical

spurs and claws brown.

Female. Body stout. Antennae stout and short, not reaching posterior margin of pronotum. Longitudinal diameter of eyes about equal to its transverse diameter, and subocular furrows. Anterior and posterior margins straight, or slightly concave, length of prozona as 1.5-1.6 times as that of metazone; length of mesosternal lobes as 1.5 times as that of width, most width of mesosternal

Figs. 8-9. *Eokingdonella cyanecula* sp. nov.

interspace as 3.8 times as long, width of mesosternal interspace about equal to that of mesosternal interspace. Supra-anal plate triangular, centre of proximal part with longitudinal groove, central part with transverse keel. Cerci short conical. Ovipositor stout short, length of upper valve as 2.3 times as width. Subgenital plate longer than wide, posterior margin triangularly prominent. Body color as male.

Measurement. Length of body: 22.0-22.5 mm, 25-29 mm; length of pronotum: 4.0-4.5 mm, 5.0-6.5 mm; length of hind femur 11.0-11.5 mm, 13-16 mm.

Holotype, Yajiang, Sichuan, 4400 mm (29°42'N, 100°45'E), 7 Sep. 2005, collected by SHI Fu-Ming. Paratypes: 8♂, 8♀, same data as holotype.

This new species is similar to *Eokingdonella tibetana* (Mistsh., 1952), but differs from latter in length of furcula of terminal tergite as 1/11 times as supra-anal plate, hind tibia dark blue, apex yellowish white; body blue brown.

Etymology. The specific name is derived from the

Latin “cyanecul”.

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四川省原金蝗属一新种记述(直翅目, 斑腿蝗科)

郑哲民¹ 石福明²

1. 陕西师范大学动物研究所 西安 710062
 2. 河北大学生命科学学院 保定 071002

摘要 记述采自四川省西部地区原金蝗属1新种, 兰原金蝗 *Eokingdonella cyanecula* sp. nov. 模式标本保存于陕西师范大学动物研究所昆虫标本室及河北大学生命科学学院博物馆。

兰原金蝗, 新种 *Eokingdonella cyanecula* sp. nov. (图1~9)
 新种近似于西藏原金蝗 *Eokingdonella tibetana* (Mistshenko,

关键词 直翅目, 斑腿蝗科, 原金蝗属, 新种。

中图分类号 Q969.26

1952), 与后者之主要区别为雄性尾片长为肛上板长的1/11; 后足胫节暗兰色, 端部淡黄白色; 体兰褐色。

正模, 四川雅安, 4 400 m, 2005-08-07, 石福明采; 副模8, 同正模。

词源: 新种名以拉丁词 *cyanecul* 兰色为名。